Four Steps to a Chemical-Free Lawn

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Step 1: Mowing for vigorous root growth

Cost: $0

Adjust your mower to cut at a height of 2-3 inches. This is the single most important factor in maintaining a thick and healthy lawn. Also, be sure to avoid shocking plants by removing *no more than* one-third of the grass blade. A sharp mower blade is also beneficial as it makes a clean cut that denies access to disease organisms.

Tip: For free lawn fertilizer, leave grass clippings where they fall.

Step 2: Watering sensibly

Cost: $s saved if your lawn now gets more than 1" of water per week

Water no more than one-inch per week and water only one time per week, preferably on a sunny morning before 9 a.m. This way, you will promote healthy root growth and resistance to insects and disease. For drought conditions, it's important to know what kind of grasses you have in your lawn. Provided you have good soil, Kentucky Bluegrass and Fescues can go without water for an extended period of time. They will go dormant (brown, but alive), and will become green again once cooler weather returns. Once the grass goes dormant, it's best not to water.

Tip: Use a shallow can, placed in the sprinkler area, to measure the weekly inch of water (this inch should also include any rainfall during the week).

Step 3: Dethatching and aerating for improved movement of water, air and nutrients

Cost: Dethatch = $40-$60
Aerate = $55-$80

If your lawn has more than a ½ inch of thatch and/or soils that are compacted by heavy traffic, grass roots are having a tough time getting needed water, air, and nutrients. You can dethatch and/or aerate with equipment from a local tool rental retailer. If soil is compacted more than 2 inches deep, find a professional that has equipment that can penetrate 6-8 inches. Ensure continual aeration by protecting earthworms in your soil.

Tip: When you dethatch or aerate, it's a perfect time to overseed for a thick, healthy lawn.

Step 4: Fertilizing and controlling pests for a healthy soil

Cost: Soil Test = $13
Organic/Slow Release Fertilizers = variable

A healthy soil biology is a lawn's best defense against pests and disease. This biology is also essential in the uptake of nutrients by grass plants. The use of chemical fertilizers and pesticides can harm soil, setting up a cycle of dependency where increasing product is needed to combat ever more lawn problems. If you've been using chemical fertilizers and pesticides, you'll need to reestablish soil biology (see: Soilfoodweb.com). Earthworms are a good sign that your soil biology is in tact.

Following are five guidelines to support beneficial soil organisms that will, in turn, support a healthy lawn and keep pest problems in check.

- Get a soil test to understand soil pH and fertility. That way you'll know exactly what nutrients your lawn needs. The University of Massachusetts has a soil testing service that gives you results and soil amendment recommendations for optimal grass growth. Call them at (413) 545-2311 or see their web site: http://www.umass.edu/plsoils/soiltest/services1.htm

- If your soil test shows that you need fertilizer, use organic or slow-release fertilizers since they have beneficial bacteria and fungi that bind to soil particles. This keeps nutrients where they are more easily available to plants. These fertilizers include cottonseed, bone or blood meals, fish emulsion, and composted grass clippings, vegetables/fruits, and manures.

- Monitor and accurately identify any pest problems that you feel you need to address. For help, contact URI's Cooperative Extension (1 800-448-1011).

- Try nontoxic pest control practices first. For example, you can use beneficial nematodes to attack grubs or apply milky spore powder as a preventative for Japanese beetle grub infestations. You can also now get less toxic products like soaps, horticultural oils, and plant-based insecticides to address many problems.

- Spot treat with pesticides only when absolutely necessary.

<u>Tip:</u> When using fertilizer, be sure to sweep all fertilizer off of driveways and walkways. The nitrogen of organic fertilizers can adversely impact nearby waters if they are washed away with a hose or with the next rainfall.